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L113 ANSWER 1 OF 11 HCAPLUS COPYRIGHT 2008 ACS on STN

AN 2006:658402 HCAPLUS Full-text

DN 145:106934

TI Electrode plate containing crosslinked binder for lithium sulfur battery

IN Han, Ji Seong; Jung, Yong Ju; Kim, Jan Di; Kim, Seok

PA Samsung Sdi Co., Ltd., S. Korea

SO Repub. Korean Kongkai Taehe Kongbo, No pp. given

CODEN: KRXXA7

DT Patent

LA Korean

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	KR 2004009328	A	20040131	KR 2002-43249	20020723 <--
PRAI	KR 2002-43249		20020723	<--	
AB	An electrode plate for a lithium sulfur battery, its preparation method and a lithium sulfur battery containing the electrode plate are provided, to improve the energy d. and the lifetime characteristic of a lithium sulfur battery by employing a crosslinked binder having excellent chemical resistance and binding force. The electrode plate comprises the polymer binder which is insol. in an electrolyte solution and is crosslinked by the heat or the irradiation of an UV ray or an elec. beam. Preferably the crosslinked polymer binder is the poly(vinyl pyrrolidone). Preferably a crosslinking initiator is added when the polymer binder is crosslinked, and the initiator is the 4,4'-diazidostilbene-2,2'-disulfonic acid sodium salt tetrahydrate. Preferably the degree of swelling of the binder is 20 % or less.				
IC	ICM B01M0604-66				
CC	52-2 (Electrochemical, Radiational, and Thermal Energy Technology)				
ST	electrode plate contg crosslinked binder lithium sulfur battery				
IT	Binders				

(crosslinked; electrode plate containing crosslinked binder for lithium sulfur battery and lithium sulfur battery containing electrode plate)

IT Secondary batteries
Swelling, physical
(electrode plate containing crosslinked binder for lithium sulfur battery and lithium sulfur battery containing electrode plate)

IT 2718-90-3, 4,4'-Diazidostilbene-2,2'-disulfonic acid sodium salt 7439-93-2, Lithium, uses 9003-39-8, Poly(vinyl pyrrolidone)
RL: TEM (Technical or engineered material use); USES (Uses)
(electrode plate containing crosslinked binder for lithium sulfur battery and lithium sulfur battery containing electrode plate)

IT 7439-93-2, Lithium, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(electrode plate containing crosslinked binder for lithium sulfur battery and lithium sulfur battery containing electrode plate)

RN 7439-93-2 HCAPLUS
CN Lithium (CA INDEX NAME)

L1

L113 ANSWER 2 OF 11 HCAPLUS COPYRIGHT 2008 ACS on STN

AN 2004:1026264 HCAPLUS Full-text

DN 142:23764

TI Ion-conducting thermally convertible polymeric material and polymerized compound for its production

IN Mokrousov, G. M.; Izaak, T. I.; Gavrilenko, N. A.

PA Tomskii Gosudarstvennyi Universitet, Russia

SO Russ., No pp. given

CODEN: RUXXE7

DT Patent

LA Russian

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	RU 2241282	C2	20041127	RU 2000-129845	20001128 <--
PRAI	RU 2000-129845		20001128	<--	
AB	<p>Ion-conducting thermally convertible polymeric material and polymerized compound for its production as solid-state ion conductors or polymeric electrolytes are described. The proposed compound for producing ion-conducting thermally convertible polymeric materials has in its composition alkyl and/or allyl ester of methacrylic acid that functions as monomer that incorporated in alkyl radical 1 - 16 atoms of carbon and one or more salts of s-, p-, d-, and f-metals of halide-substituted low aliphatic carbonic acid having 1 - 4 atoms of carbon and/or ammonium trifluoroacetate in alkyl radical with low carbonic acids incorporating 1 - 6 atoms of carbon in alkyl radical added or not to them, remaining chelate-forming organic compds. that incorporate heteroatom of nitrogen, or sulfur being added or not to them. In addition it has salts of s- and/or p-metal of alkyl and/or alkenyl-acrylic acid, and/or organic component composed of one or more low-mol. substances each incorporating in its composition at least two functional groups of OH, NHx, CS, COOH, CO and/or polar solvents capable of dissolving both mentioned</p>				

salts of halide-substituted low aliphatic carbonic acid and mentioned salts of alkyl and/or alkenyl-acrylic acid, proportion of components being as follows: 1 10⁻⁴ - 2 mol/l of monomeric mixture of mentioned salts of halide-substituted low aliphatic carbonic acid; 0.01 - 0.1 mol fractions of salt of s- and/or p-metal of alkyl and/or alkenyl-acrylic acid, or 0.1 - 0.55 mol fractions of mentioned organic components, or mixture thereof; and the rest of monomer of mentioned composition. In addition description is given of ion-conducting thermally convertible polymeric material produced from polymeric compound and ion-conducting polymeric film produced from thermally convertible polymeric material. Transparent ion-conducting material produced in the process has elec. conductivity as high as 10⁻⁴ to 10⁻⁵ S/cm at room temperature with desired characteristics of material being retained.

EFFECT: enhanced elec. conductivity of material, that is enhanced conductivity and stability of gel-electrolyte produced in the process.

- IC ICM H01M0006-16
ICS H01M0006-19; H01M0010-40; C08L0033-10;
C08J0005-18
- CC 36-5 (Physical Properties of Synthetic High Polymers)
Section cross-reference(s): 52, 76
- IT Ionic conductors
Polymer electrolytes
Solid electrolytes
(ion-conducting thermally convertible polymeric material)
- IT 57-13-6, Urea, processes 60-00-4, EDTA, processes 67-68-5, DMSO, processes 68-12-2, Dimethylformamide, processes 75-05-8, Acetonitrile, processes 75-12-7, Formamide, processes 79-41-4, Methacrylic acid, processes 80-62-6, Methylmethacrylate 107-21-1, Ethylene glycol, processes 108-32-7, Propylene carbonate 123-39-7, N-Methylformamide 124-04-9, Adipic acid, processes 124-09-4, Hexamethylenediamine, processes 144-62-7, Oxalic acid, processes 2923-16-2, Potassium trifluoroacetate 2923-17-3, Lithium trifluoroacetate 3336-58-1, Ammonium trifluoroacetate 6900-35-2, Potassium methacrylate 9004-57-3, Ethylcellulose 21907-47-1, Zinc trifluoroacetate 25322-68-3, Polyethylene glycol
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(ion-conducting thermally convertible polymeric material comprising)
- IT 94-36-0, Benzoyl peroxide, processes
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(polymerization initiator; use in preparation of ion-conducting thermally convertible polymeric material)
- IT 79-41-4, Methacrylic acid, processes 80-62-6, Methylmethacrylate 107-21-1, Ethylene glycol, processes 2923-17-3, Lithium trifluoroacetate 6900-35-2, Potassium methacrylate 25322-68-3, Polyethylene glycol
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(ion-conducting thermally convertible polymeric material comprising)
- RN 79-41-4 HCAPLUS
- CN 2-Propenoic acid, 2-methyl- (CA INDEX NAME)



- RN 80-62-6 HCAPLUS
- CN 2-Propenoic acid, 2-methyl-, methyl ester (CA INDEX NAME)



RN 107-21-1 HCAPLUS
CN 1,2-Ethanediol (CA INDEX NAME)



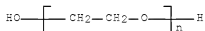
RN 2923-17-3 HCAPLUS
CN Acetic acid, 2,2,2-trifluoro-, lithium salt (1:1) (CA INDEX NAME)



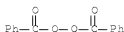
RN 6900-35-2 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, potassium salt (1:1) (CA INDEX NAME)



RN 25322-68-3 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), α -hydro- ω -hydroxy- (CA INDEX NAME)



IT 94-36-0, Benzoyl peroxide, processes
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent) (polymerization initiator; use in preparation of ion-conducting thermally convertible polymeric material)
RN 94-36-0 HCAPLUS
CN Peroxide, dibenzoyl (CA INDEX NAME)



L113 ANSWER 3 OF 11 HCAPLUS COPYRIGHT 2008 ACS on STN

AN 2004:252055 HCAPLUS Full-text

DN 140:256340

TI Anodes for lithium battery

IN Kim, Yong-tae; Choi, Su-suk; Choi, Yun-suk; Lee, Kyoung-bee

PA Samsung Sdi Co., Ltd., S. Korea

SO U.S. Pat. Appl. Publ., 10 pp.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 20040058232	A1	20040325	US 2003-664157	20030917 <--
	KR 2004026208	A	20040330	KR 2002-57577	20020923 <--
	JP 2004119372	A	20040415	JP 2003-308015	20030829 <--
	CN 1492523	A	20040428	CN 2003-158726	20030922 <--
PRAI	KR 2002-57577	A	20020923	<--	

AB A lithium neg. electrode for a lithium battery has good cycle life and capacity characteristics. The lithium neg. electrode comprises a lithium metal layer and a protective layer present on the lithium metal layer, where the protective layer includes an organosulfur compound. An organosulfur compound having a thiol terminal group is preferred since such a compound can form a complex with lithium metal to enable coating to be carried out easily. The organosulfur compound has a large number of S or N elements having high electronegativity to form a complex with lithium ions, so it renders lithium ions to be deposited relatively evenly on the lithium metal surface, reducing dendrite formation.

IC ICM H01M0002-16

ICS H01M0004-66; H01M0004-40

INCL 429137000; 429246000; 429245000; 429212000; 429231950

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)

Section cross-reference(s): 38

ST anode lithium battery

IT Chalcogenides

Oxides (inorganic), uses

RL: DEV (Device component use); USES (Uses)

(Li-containing; anodes for lithium battery)

IT Peroxides, uses

RL: MOA (Modifier or additive use); USES (Uses)

(acyl; anodes for lithium battery)

IT Hydroperoxides

RL: MOA (Modifier or additive use); USES (Uses)

(alkyl, tertiary; anodes for lithium battery)

IT Peroxides, uses

RL: MOA (Modifier or additive use); USES (Uses)

(alkyl; anodes for lithium battery)

IT Battery anodes

Coating materials

Conducting polymers

(anodes for lithium battery)

IT Acrylic polymers, uses

Polyanilines

Polyoxyalkylenes, uses

- RL: MOA (Modifier or additive use); USES (Uses)
(anodes for lithium battery)
- IT Amino acids, uses
Halogens
Lewis acids
Rare earth chlorides
Sulfonic acids, uses
Transition metal compounds
RL: MOA (Modifier or additive use); USES (Uses)
(dopant; anodes for lithium battery)
- IT Primary batteries
Secondary batteries
(lithium; anodes for lithium battery)
- IT Esters, uses
Ketals
RL: MOA (Modifier or additive use); USES (Uses)
(peroxy; anodes for lithium battery)
- IT Crown ethers
Polybenzimidazoles
Polyquinolines
Polyquinoxalines
RL: MOA (Modifier or additive use); USES (Uses)
(thiophenes, polymers; anodes for lithium battery)
- IT 110-71-4 111-96-6, Diglyme 126-33-0, Sulfolane 646-06-0,
1,3-Dioxolane 7439-93-2, Lithium, uses
7764-34-9, Sulfur, uses
RL: DEV (Device component use); USES (Uses)
(anodes for lithium battery)
- IT 67-63-0, Isopropyl alcohol, uses 75-91-2, tert-Butyl
hydroperoxide 78-63-7, 2,5-Dimethyl-2,5-di-(tert-
butylperoxy)hexane 78-67-1, Azobisisobutyronitrile
80-35-9, Cumene hydroperoxide 80-43-3, Dicumyl peroxide
94-36-0, Dibenzoyl peroxide, uses 105-74-8, Dilauroyl
peroxide 110-05-4, Di-tert-butyl peroxide 123-23-9,
Succinic acid peroxide 762-12-9, Didecanoil peroxide
927-07-1, tert-Butylperoxypivalate 2167-23-9,
2,2-Di-(tert-butylperoxy)butane 3025-88-5, 2,5-Dihydroperoxy-2,5-
dimethylhexane 4511-39-1, tert-Amylperoxybenzoate
15667-10-4, 1,1-Di-(tert-amylperoxy)cyclohexane 16066-38-9
, Di(n-propyl)peroxy dicarbonate 16111-62-9,
Di(2-ethylhexyl)peroxy dicarbonate 19910-65-7,
Di(sec-butyl)peroxy dicarbonate 24937-05-1, Poly(ethyleneadipate)
24938-43-0, Poly(β -propiolactone) 24969-06-0,
Polypichlorohydrin 25190-62-9, Poly(p-phenylene) 25233-30-1,
Polyaniline 25233-30-1D, Polyaniline, sulfonated 25233-34-5,
Polythiophene 25233-34-5D, Polythiophene, derivs. 25322-68-3,
Pec 25322-69-4, Polypropylene oxide 25667-11-2,
Poly(ethylenesuccinate) 25721-76-0, Polyethylene glycol
dimethacrylate 25852-49-7, Polypropylene glycol dimethacrylate
26570-48-9, Poly(ethylene glycol diacrylate) 26748-47-0,
 α -Cumylperoxyneodecanoate 34099-48-4, Peroxydicarbonate
52496-08-9, Poly(propyleneglycoldiacrylate) 55794-20-2,
Ethyl 3,3-di-(tert-butylperoxy)butyrate 95732-35-7 97332-10-0,
Poly(N-propylaziridine) 139096-57-4, Isoquinoline homopolymer
172973-34-1
RL: MOA (Modifier or additive use); USES (Uses)
(anodes for lithium battery)
- IT 865-44-1, Iodine trichloride 1493-13-6, Triflic acid 7446-11-9,
Sulfur trioxide, uses 7550-45-0, Titanium chloride (TiCl₄)
(T-4)-, uses 7553-56-2, Iodine, uses 7601-90-3, Perchloric acid, uses

7637-07-2, uses 7647-01-0, Hydrochloric acid, uses 7647-19-0, Phosphorus pentafluoride 7664-39-3, Hydrofluoric acid, uses 7664-93-9, Sulfuric acid, uses 7697-37-2, Nitric acid, uses 7705-08-0, Ferric chloride, uses 7721-01-9, Tantalum chloride (TaCl₅) 7726-95-6, Bromine, uses 7782-44-7, Oxygen, uses 7782-50-5, Chlorine, uses 7783-68-8, Niobium fluoride nbf₅ 7783-70-2, Antimony pentafluoride 7783-81-5 7783-82-6 7783-93-9, Silver perchlorate 7784-36-3, Arsenic pentafluoride 7789-21-1, Fluorosulfonic acid 7789-33-5, Iodine monobromide 7790-94-5, Chlorosulfonic acid 7790-99-0, Iodine monochloride 10026-11-6 10026-12-7, Niobium chloride (NbCl₅) 10277-43-7, Lanthanum nitrate hexahydrate 10294-33-4, Boron tribromide 10294-34-5 13283-01-7 13499-05-3 13709-32-5, Bis(fluorosulfonyl)peroxide 13774-85-1 13819-84-6, Molybdenum fluoride mof₅ 13870-10-5, Iron chloride oxide feocl 13873-84-2, Iodine monofluoride 14635-75-7, Nitrosyl tetrafluoroborate 14797-73-0, Perchlorate 14874-70-5, Tetrafluoroborate 16871-80-0, Nitrosyl hexachloroantimonate 16887-00-6, Chloride, uses 16919-18-9, Hexafluorophosphate 16941-92-7, Hexachloroiridic acid 16973-45-8, Hexafluoroarsenate 17111-95-4 17856-92-7 20461-54-5, Iodide, uses 24959-67-9, Bromide, uses 25321-43-1, Octylbenzenesulfonic acid 27176-87-0, Dodecylbenzene sulfonic acid
 RL: MOA (Modifier or additive use); USES (Uses)
 (dopant; anodes for lithium battery)
 IT 540-63-6, 1,2-Ethanedithiol 1072-71-5, 2,5-Dimercapto-1,3,4-thiadiazole 2001-93-6, 2,4-Dimercaptopyrimidine 2150-02-9, Bis(2-mercaptoethyl)ether 3570-55-6, Bis(2-mercaptoethyl)sulfide 9002-98-6 9002-98-6D, derivs. 37306-44-8D, Triazole, mercapto derivs 131538-50-6 135886-78-1 135886-79-2
 RL: TEM (Technical or engineered material use); USES (Uses)
 (protective coating; anodes for lithium battery)
 IT 7704-34-9D, Sulfur, organosulfur compound
 RL: TEM (Technical or engineered material use); USES (Uses)
 (protective layer; anodes for lithium battery)
 IT 273-77-8, 1,2,3-Benzothiadiazole 612-79-3, 6,6'-Biquinoline 25013-01-8, Polypyridine 25013-01-8D, Polypyridine, derivs. 26856-35-9, Dihydrophenanthrene 27986-50-1, Poly(1,3-cyclohexadiene) 30604-81-0, Polypyrrole 30604-81-0D, Polypyrrole, derivs. 51937-67-8, Polyferrocene 71730-08-0, Polyanthraquinone 136902-52-8, 2,2'-Bipyridine homopolymer 136902-52-8D, 2,2'-Bipyridine homopolymer, derivs. 190201-51-5, Pyrimidine homopolymer 190201-57-1, 1,5-Naphthyridine homopolymer
 RL: MOA (Modifier or additive use); USES (Uses)
 (thiophenes, polymers; anodes for lithium battery)
 IT 7439-93-2, Lithium, uses 7704-34-9, Sulfur, uses
 RL: DEV (Device component use); USES (Uses)
 (anodes for lithium battery)
 RN 7439-93-2 HCAPLUS
 CN Lithium (CA INDEX NAME)

L1

RN 7704-34-9 HCAPLUS
 CN Sulfur (CA INDEX NAME)

S

IT 75-51-2, tert-Butyl hydroperoxide 78-63-7, 2,5-Dimethyl-2,5-di-(tert-butylperoxy)hexane 78-67-1, Azobisisobutyronitrile 80-15-9, Cumene hydroperoxide 80-43-3, Dicumyl peroxide 94-36-0, Dibenzoyl peroxide, uses 105-74-6, Dilauroyl peroxide 110-05-4, Di-tert-butyl peroxide 123-23-9, Succinic acid peroxide 762-12-9, Didecanoyl peroxide 327-07-1, tert-Butylperoxyisovalate 2167-23-9, 2,2-Di-(tert-butylperoxy)butane 3025-88-5, 2,5-Dihydroperoxy-2,5-dimethylhexane 4511-39-1, tert-Amylperoxybenzoate 15667-10-4, 1,1-Di-(tert-amylperoxy)cyclohexane 16066-38-9, Di(n-propyl)peroxy dicarbonate 16111-62-9, Di(2-ethylhexyl)peroxy dicarbonate 19910-65-7, Di(sec-butyl)peroxy dicarbonate 24969-06-0, Polyepichlorohydrin 25322-68-3, Peo 25322-69-4, Polypropylene oxide 25721-76-0, Polyethylene glycol dimethacrylate 25852-49-7, Polypropylene glycol dimethacrylate 26570-48-9, Poly(ethylene glycol diacrylate) 26748-47-0, α -Cumylperoxyneodecanoate 34039-48-4, Peroxydicarbonate 52496-08-9, Poly(propyleneglycoldiacrylate) 55794-20-2, Ethyl 3,3-di-(tert-butylperoxy)butyrate 95732-35-7
 RL: MOA (Modifier or additive use); USES (Uses)
 (anodes for lithium battery)

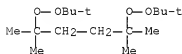
RN 75-91-2 HCAPLUS

CN Hydroperoxide, 1,1-dimethylethyl (CA INDEX NAME)

HO—O—Bu—t

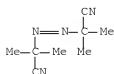
RN 78-63-7 HCAPLUS

CN Peroxide, 1,1'-(1,1,4,4-tetramethyl-1,4-butanediyl)bis[2-(1,1-dimethylethyl) (CA INDEX NAME)]



RN 78-67-1 HCAPLUS

CN Propanenitrile, 2,2'-(1,2-diazenediyl)bis[2-methyl- (CA INDEX NAME)]



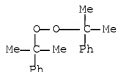
RN 80-15-9 HCAPLUS

CN Hydroperoxide, 1-methyl-1-phenylethyl (CA INDEX NAME)



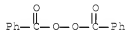
RN 80-43-3 HCAPLUS

CN Peroxide, bis(1-methyl-1-phenylethyl) (CA INDEX NAME)



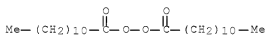
RN 94-36-0 HCAPLUS

CN Peroxide, dibenzoyl (CA INDEX NAME)



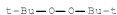
RN 105-74-8 HCAPLUS

CN Peroxide, bis(1-oxododecyl) (CA INDEX NAME)



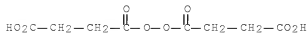
RN 110-05-4 HCAPLUS

CN Peroxide, bis(1,1-dimethylethyl) (CA INDEX NAME)



RN 123-23-9 HCAPLUS

CN Butanoic acid, 4,4'-dioxybis[4-oxo- (CA INDEX NAME)



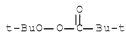
RN 762-12-9 HCAPLUS

CN Peroxide, bis(1-oxodecyl) (CA INDEX NAME)



RN 927-07-1 HCAPLUS

CN Propaneperoxoic acid, 2,2-dimethyl-, 1,1-dimethylethyl ester (CA INDEX NAME)



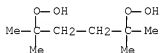
RN 2167-23-9 HCAPLUS

CN Peroxide, 1,1'-(1-methylpropylidene)bis[2-(1,1-dimethylethyl) (CA INDEX NAME)



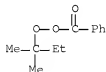
RN 3025-88-5 HCAPLUS

CN Hydroperoxide, 1,1'-(1,1,4,4-tetramethyl-1,4-butanediyl)bis- (CA INDEX NAME)



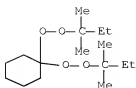
RN 4511-39-1 HCAPLUS

CN Benzenecarboperoxoic acid, 1,1-dimethylpropyl ester (CA INDEX NAME)



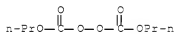
RN 15667-10-4 HCAPLUS

CN Peroxide, 1,1'-cyclohexylidenebis[2-(1,1-dimethylpropyl) (CA INDEX NAME)



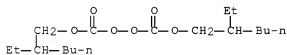
RN 16066-38-9 HCAPLUS

CN Peroxydicarboxylic acid, C,C'-dipropyl ester (CA INDEX NAME)



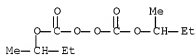
RN 16111-62-9 HCAPLUS

CN Peroxydicarboxylic acid, C,C'-bis(2-ethylhexyl) ester (CA INDEX NAME)



RN 19910-65-7 HCAPLUS

CN Peroxydicarboxylic acid, C,C'-bis(1-methylpropyl) ester (CA INDEX NAME)



RN 24969-06-0 HCAPLUS

CN Oxirane, 2-(chloromethyl)-, homopolymer (CA INDEX NAME)

CM 1

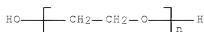
CRN 106-89-8

CMF C3 H5 Cl O

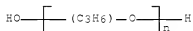


RN 25322-68-3 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -hydroxy- ω -hydroxy- (CA INDEX NAME)



RN 25322-69-4 HCAPLUS

CN Poly[oxy(methyl-1,2-ethanediyl)], α -hydro- ω -hydroxy- (CA INDEX NAME)

RN 25721-76-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,1'-(1,2-ethanediyl) ester, homopolymer (CA INDEX NAME)

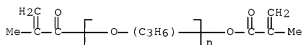
CM 1

CRN 97-90-5

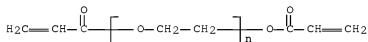
CMF C10 H14 O4



RN 25852-49-7 HCAPLUS

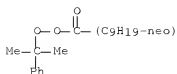
CN Poly[oxy(methyl-1,2-ethanediyl)], α -(2-methyl-1-oxo-2-propen-1-yl)- ω -[(2-methyl-1-oxo-2-propen-1-yl)oxy]- (CA INDEX NAME)

RN 26570-48-9 HCAPLUS

CN Poly[oxy-1,2-ethanediyl], α -(1-oxo-2-propen-1-yl)- ω -[(1-oxo-2-propen-1-yl)oxy]- (CA INDEX NAME)

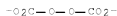
RN 26748-47-0 HCAPLUS

CN Neodecaneperoxoic acid, 1-methyl-1-phenylethyl ester (CA INDEX NAME)

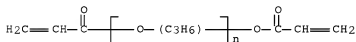


RN 34099-48-4 HCAPLUS

CN Peroxydicarbonate (CA INDEX NAME)

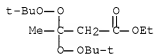


RN 52496-08-9 HCAPLUS

CN Poly[oxy(methyl-1,2-ethanediyl)], α -(1-oxo-2-propen-1-yl)- ω -[(1-oxo-2-propen-1-yl)oxy]- (CA INDEX NAME)

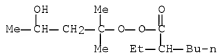
RN 55794-20-2 HCAPLUS

CN Butanoic acid, 3,3-bis[(1,1-dimethylethyl)dioxy]-, ethyl ester (CA INDEX NAME)



RN 95732-35-7 HCAPLUS

CN Hexaneperoxoic acid, 2-ethyl-, 3-hydroxy-1,1-dimethylbutyl ester (CA INDEX NAME)



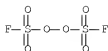
IT 13709-32-5, Bis(fluorosulfonyl)peroxide

RL: MOA (Modifier or additive use); USES (Uses)

(dopant; anodes for lithium battery)

RN 13709-32-5 HCAPLUS

CN Peroxydisulfuryl fluoride (6CI, 8CI, 9CI) (CA INDEX NAME)



IT 7704-34-9D, Sulfur, organosulfur compound
 RL: TEM (Technical or engineered material use); USES (Uses)
 (protective layer; anodes for lithium battery)
 RN 7704-34-9 HCAPLUS
 CN Sulfur (CA INDEX NAME)

S

L113 ANSWER 4 OF 11 HCAPLUS COPYRIGHT 2008 ACS on STN

AN 2004:182343 HCAPLUS [Full-text](#)

DN 140:202488

TI Polymer electrolyte for lithium secondary battery with
 improved safety and reduced swelling

IN Lee, Yong-beom

PA Samsung Sdi Co., Ltd., S. Korea

SO U.S. Pat. Appl. Publ., 8 pp.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 20040043298	A1	20040304	US 2003-440245	20030519 <--
	KR 2004020631	A	20040309	KR 2002-52280	20020831 <--
	CN 1479401	A	20040303	CN 2003-152463	20030704 <--
PRAI	KR 2002-52280	A	20020831	<--	

AB The invention concerns a polymer electrolyte that extends the cycle life, improves the safety, and reduces the swelling of a battery, compared with a polymer electrolyte containing a poly(alkylene oxide) polymer. Also, a lithium battery utilizes the polymer electrolyte. The polymer electrolyte contains a polymerized product from a polymer electrolyte forming composition containing a multifunctional isocyanurate monomer of a particular structure, a lithium salt, and a nonaq. organic solvent.

IC ICM H61M9906-18

INCL 429323000

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
 Section cross-reference(s): 38

ST polymer electrolyte lithium secondary battery improved
 safety reduced swelling

IT Peroxides, processes

RL: CPS (Chemical process); PEP (Physical, engineering or chemical
 process); PROC (Process)
 (acyl, polymerization initiator; polymer electrolyte for
 lithium secondary battery with improved safety and
 reduced swelling)

IT Peroxides, processes

RL: CPS (Chemical process); PEP (Physical, engineering or chemical
 process); PROC (Process)

- (alkyl, polymerization initiator; polymer electrolyte for lithium secondary battery with improved safety and reduced swelling)
- IT Hydroperoxides
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
(alkyl, tertiary, polymerization initiator; polymer electrolyte for lithium secondary battery with improved safety and reduced swelling)
- IT Secondary batteries
(lithium; polymer electrolyte for lithium secondary battery with improved safety and reduced swelling)
- IT Esters, processes
Ketals
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
(peroxy, polymerization initiator; polymer electrolyte for lithium secondary battery with improved safety and reduced swelling)
- IT Carbonates, processes
Peroxides, processes
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
(peroxycarbonates, polymerization initiator; polymer electrolyte for lithium secondary battery with improved safety and reduced swelling)
- IT Battery electrolytes
Polymerization catalysts
Safety
Swelling, physical
(polymer electrolyte for lithium secondary battery with improved safety and reduced swelling)
- IT Carbon fibers, uses
Carbonaceous materials (technological products)
RL: DEV (Device component use); USES (Uses)
(polymer electrolyte for lithium secondary battery with improved safety and reduced swelling)
- IT Azo compounds
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
(polymerization initiator; polymer electrolyte for lithium secondary battery with improved safety and reduced swelling)
- IT Lithium alloy, base
RL: DEV (Device component use); USES (Uses)
(polymer electrolyte for lithium secondary battery with improved safety and reduced swelling)
- IT 96-47-9, 2-Methyltetrahydrofuran 96-48-0, γ -Butyrolactone 96-49-1, Ethylene carbonate 105-58-8, Diethyl carbonate 107-31-3, Methyl formate 108-32-7, Propylene carbonate 109-94-4, Ethyl formate 109-99-9, Thf, uses 112-49-2, Triglyme 143-24-8, Tetraglyme 462-06-6, Fluorobenzene 616-38-6, Dimethyl carbonate 4824-75-3, Butylmethyl carbonate 7439-93-2, Lithium, uses 7704-34-9, Sulfur, uses 7704-34-9D, Sulfur, compds. 7782-42-5, Graphite, uses 7791-03-9, Lithium perchlorate 12190-79-3, Cobalt lithium oxide colio2 14283-07-9, Lithium tetrafluoroborate 21324-40-3, Lithium hexafluorophosphate 27858-05-5, DiFluorobenzene 29935-35-1, Lithium hexafluoroarsenate 33454-32-9, Lithium triflate 35363-40-7, Ethyl propylcarbonate, uses 39309-70-4, Lithium nickel oxide

39457-42-6, Lithium manganese oxide 51177-06-1
 , Chromium lithium oxide 52627-24-4, Cobalt
 lithium oxide 56525-42-9, Methyl propylcarbonate, uses
 73506-93-1, Diethoxyethane 90076-65-6 131651-65-5
 132843-44-8 654675-99-7, Lithium boride
 fluoride libf6

RL: DEV (Device component use); USES (Uses)
 (polymer electrolyte for lithium secondary battery
 with improved safety and reduced swelling)

IT 42033-33-0P, Tris(2-acryloyloxy)ethyl isocyanurate homopolymer
 90802-77-0P 93295-01-3P

RL: DEV (Device component use); SPN (Synthetic preparation); PREP
 (Preparation); USES (Uses)

(polymer electrolyte for lithium secondary battery
 with improved safety and reduced swelling)

IT 15520-13-3, Di(4-tert-butylcyclohexyl)peroxy dicarbonate
 34099-48-4, Peroxydicarbonate

RL: CPS (Chemical process); PEP (Physical, engineering or chemical
 process); PROC (Process)

(polymerization initiator; polymer electrolyte for lithium
 secondary battery with improved safety and reduced swelling)

IT 7439-93-2, Lithium, uses 7704-34-9,
 Sulfur, uses 7704-34-9D, Sulfur, compds.

7791-03-9, Lithium perchlorate 12190-79-3,
 Cobalt lithium oxide colio2 14283-07-9,
 Lithium tetrafluoroborate 21324-40-3, Lithium
 hexafluorophosphate 29835-35-1, Lithium
 hexafluoroarsenate 33454-82-9, Lithium triflate
 39300-70-4, Lithium nickel oxide 39457-42-6,
 Lithium manganese oxide 51177-06-1, Chromium
 lithium oxide 52627-24-4, Cobalt lithium oxide
 90076-65-6 131651-65-5 132843-44-8
 654675-99-7, Lithium boride fluoride libf6

RL: DEV (Device component use); USES (Uses)
 (polymer electrolyte for lithium secondary battery
 with improved safety and reduced swelling)

RN 7439-93-2 HCAPLUS

CN Lithium (CA INDEX NAME)

L1

RN 7704-34-9 HCAPLUS

CN Sulfur (CA INDEX NAME)

S

RN 7704-34-9 HCAPLUS

CN Sulfur (CA INDEX NAME)

S

RN 7791-03-9 HCAPLUS

CN Perchloric acid, lithium salt (1:1) (CA INDEX NAME)



● Li

RN 12190-79-3 HCAPLUS

CN Cobalt lithium oxide (CoLiO2) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	2	17778-80-2
Co	1	7440-48-4
Li	1	7439-93-2

RN 14283-07-9 HCAPLUS

CN Borate(1-), tetrafluoro-, lithium (1:1) (CA INDEX NAME)



● Li+

RN 21324-40-3 HCAPLUS

CN Phosphate(1-), hexafluoro-, lithium (1:1) (CA INDEX NAME)



● Li+

RN 29935-35-1 HCAPLUS

CN Arsenate(1-), hexafluoro-, lithium (1:1) (CA INDEX NAME)



● Li⁺

RN 33454-82-9 HCAPLUS

CN Methanesulfonic acid, 1,1,1-trifluoro-, lithium salt (1:1) (CA INDEX NAME)



● Li

RN 39300-70-4 HCAPLUS

CN Lithium nickel oxide (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	x	17778-80-2
Ni	x	7440-02-0
Li	x	7439-93-2

RN 39457-42-6 HCAPLUS

CN Lithium manganese oxide (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	x	17778-80-2
Mn	x	7439-96-5
Li	x	7439-93-2

RN 51177-06-1 HCAPLUS

CN Chromium lithium oxide (CA INDEX NAME)

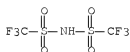
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 52627-24-4 HCAPLUS

CN Cobalt lithium oxide (CA INDEX NAME)

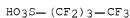
Component	Ratio	Component Registry Number
O	x	17778-80-2
Co	x	7440-48-4
Li	x	7439-93-2

RN 90076-65-6 HCAPLUS
 CN Methanesulfonamide, 1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl]-,
 lithium salt (1:1) (CA INDEX NAME)



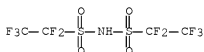
● Li

RN 131651-65-5 HCAPLUS
 CN 1-Butanesulfonic acid, 1,1,2,2,3,3,4,4,4-nonafluoro-, lithium salt (1:1)
 (CA INDEX NAME)



● Li

RN 132843-44-8 HCAPLUS
 CN Ethanesulfonamide, 1,1,2,2,2-pentafluoro-N-[(1,1,2,2,2-pentafluoroethyl)sulfonyl]-, lithium salt (1:1) (CA INDEX NAME)



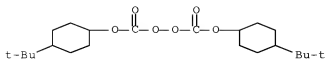
● Li

RN 654675-99-7 HCAPLUS
 CN Boron lithium fluoride (BLiF6) (CA INDEX NAME)

Component	Ratio	Component Registry Number
F	6	14762-94-8
B	1	7440-42-8
Li	1	7439-93-2

IT 15520-11-3, Di(4-tert-butylcyclohexyl)peroxy dicarbonate
 34699-48-4, Peroxydicarbonate
 RL: CPS (Chemical process); PEP (Physical, engineering or chemical
 process); PROC (Process)
 (polymerization initiator; polymer electrolyte for lithium
 secondary battery with improved safety and reduced swelling)
 RN 15520-11-3 HCAPLUS
 CN Peroxydicarbonic acid, C,C'-bis[4-(1,1-dimethylethyl)cyclohexyl] ester

(CA INDEX NAME)



RN 34099-48-4 HCAPLUS
 CN Peroxydicarbonate (CA INDEX NAME)

-O2C-O-O-CO2-

L113 ANSWER 5 OF 11 HCAPLUS COPYRIGHT 2008 ACS on STN

AN 2004:119841 HCAPLUS Full-text

DN 140:166772

TI Polymer electrolyte for lithium-sulfur battery

IN Hwang, Duck-chul; Lee, Kyoung-hee

PA Samsung E&I Co., Ltd., S. Korea

SO U.S. Pat. Appl. Publ., 15 pp.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 20040029016	A1	20040212	US 2003-635122	20030806 <--
	KR 2004014163	A	20040214	KR 2003-28968	20030507 <--
	JP 2004071560	A	20040304	JP 2003-279998	20030725 <--
	CN 1495956	A	20040512	CN 2003-127275	20030807 <--
PRAI	KR 2002-46580	A	20020807	<--	
	KR 2003-28968	A	20030507	<--	

AB Disclosed is a polymer electrolyte for a lithium sulfur battery. The electrolyte includes a monomer with a methacrylate group, an initiator, an organic solvent, and a lithium salt.

IC ICM R01M0010-40

INCL 429317000; X42-918.9; X42-930.7

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
 Section cross-reference(s): 38

ST polymer electrolyte lithium sulfur battery

IT Polyesters, uses

RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
 (hexacrylate-based; polymer electrolyte for lithium-sulfur battery)

IT Secondary batteries

(lithium; polymer electrolyte for lithium-sulfur battery)

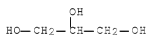
IT Intercalation compounds

RL: DEV (Device component use); USES (Uses)
 (lithium; polymer electrolyte for lithium-sulfur battery)

IT Alcohols, uses

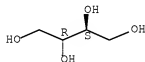
- RL: DEV (Device component use); USES (Uses)
(polyhydric, esters; polymer electrolyte for lithium-sulfur battery)
- IT lithium alloy, base
RL: DEV (Device component use); USES (Uses)
(polymer electrolyte for lithium-sulfur battery)
- IT 3087-37-4, Tetrapropyltitanate
RL: CAT (Catalyst use); USES (Uses)
(polymer electrolyte for lithium-sulfur battery)
- IT 56-81-5, Glycerol, uses 110-71-4 149-32-6, Erythritol 646-06-0, 1,3-Dioxolane 7439-93-2, Lithium, uses 7439-93-2D, Lithium, intercalation compound 7704-34-9, Sulfur, uses 7704-34-9D, Sulfur, compound 74432-42-1, Lithium polysulfide 90076-65-6
RL: DEV (Device component use); USES (Uses)
(polymer electrolyte for lithium-sulfur battery)
- IT 79-10-7DP, Acrylic acid, reaction product with dipentaerythritol and ϵ -caprolactone and butylcarbonic acid 126-58-9DP, Dipentaerythritol, reaction product with ϵ -caprolactone and acrylic acid and butylcarbonic acid 502-44-3DP, ϵ -Caprolactone, reaction product with dipentaerythritol and acrylic acid and butylcarbonic acid 10411-26-4DP, reaction product with dipentaerythritol and ϵ -caprolactone and acrylic acid
RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(polymer electrolyte for lithium-sulfur battery)
- IT 180049-13-2, Aluminum boride nitride Albn
RL: MOA (Modifier or additive use); USES (Uses)
(polymer electrolyte for lithium-sulfur battery)
- IT 75-91-2, tert-Butylhydroperoxide 78-63-7, 2,5-Dimethyl-2,5-di(tert-butylperoxy)hexane 78-67-1, Azobisisobutyronitrile 80-15-9, Cumene hydroperoxide 90-43-3, Dicumyl peroxide 94-36-0, Benzoyl peroxide, processes 105-64-6, Diisopropyl peroxy dicarbonate 105-74-8, Lauroyl peroxide 110-05-4, Di-tert-butyl peroxide 1561-49-5, Dicyclohexylperoxy dicarbonate 1712-87-4, m-Toluoyl peroxide 2167-23-9, 2,2-Di(tert-butylperoxy)butane 3006-82-4, tert-Butyl peroxy-2-ethyl hexanoate 3025-88-5, 2,5-Dihydroperoxy-2,5-dimethylhexane 14666-78-5 15520-11-3, Bis(4-tert-butylcyclohexyl)peroxy dicarbonate 15066-38-9, Di(n-propyl)peroxy-dicarbonate 16111-62-3, Di(2-ethylhexyl)peroxydicarbonate 15910-65-7, Di(sec-butyl)peroxy dicarbonate 26748-47-0, α -Cumyl peroxy neodecanoate 32752-09-3, Isobutyl peroxide 52373-75-8 55794-20-2, Ethyl 3,3-di(tert-butylperoxy)butyrate 92177-99-6, 3,3,5-Trimethylhexanoyl peroxide 95732-35-7 116657-72-8, tert-Butyl neodecanoate 118416-46-9
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
(polymerization initiator; polymer electrolyte for lithium-sulfur battery)

IT 56-81-5, Glycerol, uses 149-32-6,
 Erythritol 7439-93-2, Lithium, uses
 7439-93-2D, Lithium, intercalation compound
 7704-34-9, Sulfur, uses 7704-34-9D,
 Sulfur, compound 74432-42-1, Lithium polysulfide
 90076-65-6
 RL: DEV (Device component use); USES (Uses)
 (polymer electrolyte for lithium-sulfur
 battery)
 RN 56-81-5 HCAPLUS
 CN 1,2,3-Propanetriol (CA INDEX NAME)



RN 149-32-6 HCAPLUS
 CN 1,2,3,4-Butanetetrol, (2R,3S)-rel- (CA INDEX NAME)

Relative stereochemistry.



RN 7439-93-2 HCAPLUS
 CN Lithium (CA INDEX NAME)

L1

RN 7439-93-2 HCAPLUS
 CN Lithium (CA INDEX NAME)

L1

RN 7704-34-9 HCAPLUS
 CN Sulfur (CA INDEX NAME)

S

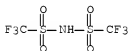
RN 7704-34-9 HCAPLUS
 CN Sulfur (CA INDEX NAME)

S

RN 74432-42-1 HCAPLUS
 CN Lithium sulfide (Li₂(Sx)) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

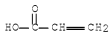
RN 90076-65-6 HCAPLUS
 CN Methanesulfonamide, 1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl]-,
 lithium salt (1:1) (CA INDEX NAME)



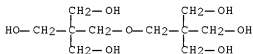
● Li

IT 79-10-7DP, Acrylic acid, reaction product with
 dipentaerythritol and ε-caprolactone and butylcarbonic
 acid 126-58-9DP, Dipentaerythritol, reaction product
 with ε-caprolactone and acrylic acid and butylcarbonic acid
 RL: DEV (Device component use); PRP (Properties); SPN (Synthetic
 preparation); PREP (Preparation); USES (Uses)
 (polymer electrolyte for Lithium-sulfur
 battery)

RN 79-10-7 HCAPLUS
 CN 2-Propenoic acid (CA INDEX NAME)



RN 126-58-9 HCAPLUS
 CN 1,3-Propanediol, 2,2'-[oxybis(methylene)]bis[2-(hydroxymethyl)- (CA INDEX
 NAME)



IT 75-91-2, tert-Butylhydroperoxide 78-63-7,
 2,5-Dimethyl-2,5-di(tert-butylperoxy)hexane 78-67-1,
 Azobisisobutyronitrile 80-15-9, Cumene hydroperoxide
 80-43-3, Dicumyl peroxide 94-36-0, Benzoyl peroxide,
 processes 195-64-6, Diisopropyl peroxy dicarbonate
 105-74-8, Lauroyl peroxide 110-05-4, Di-tert-butyl
 peroxide 1561-49-5, Dicyclo hexylperoxy dicarbonate
 1712-87-4, m-Toluoyl peroxide 2167-23-9,

2,2-Di(tert-butylperoxy)butane 3006-82-4, tert-Butyl
peroxy-2-ethyl hexanoate 3025-88-5, 2,5-Dihydroperoxy-2,5-
dimethylhexane 14666-78-5 15520-11-3,
Bis(4-tert-butylcyclohexyl)peroxy dicarbonate 16066-38-9,
Di(n-propyl)peroxy-dicarbonate 16111-62-9, Di(2-
ethylhexyl)peroxydicarbonate 19910-65-7, Di(sec-butyl)peroxy
dicarbonate 26748-47-0, α -Cumyl peroxy neodecanoate
32752-09-3, Isobutyl peroxide 52373-75-8
55794-20-2, Ethyl 3,3-di(tert-butylperoxy)butyrate
92177-99-6, 3,3,5-Trimethylhexanoyl peroxide 95732-35-7
116657-72-8, tert-Butyl neodecanoate 118416-46-9
RL: CPS (Chemical process); PEP (Physical, engineering or chemical
process); PROC (Process)
(polymerization initiator; polymer electrolyte for lithium
-sulfur battery)

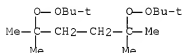
RN 75-91-2 HCAPLUS

CN Hydroperoxide, 1,1-dimethylethyl (CA INDEX NAME)



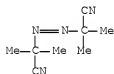
RN 78-63-7 HCAPLUS

CN Peroxide, 1,1'-(1,1,4,4-tetramethyl-1,4-butanediyl)bis[2-(1,1-
dimethylethyl) (CA INDEX NAME)



RN 78-67-1 HCAPLUS

CN Propanenitrile, 2,2'-(1,2-diazenediyl)bis[2-methyl- (CA INDEX NAME)



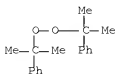
RN 80-15-9 HCAPLUS

CN Hydroperoxide, 1-methyl-1-phenylethyl (CA INDEX NAME)



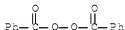
RN 80-43-3 HCAPLUS

CN Peroxide, bis(1-methyl-1-phenylethyl) (CA INDEX NAME)



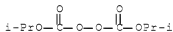
RN 94-36-0 HCAPLUS

CN Peroxide, dibenzoyl (CA INDEX NAME)



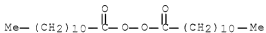
RN 105-64-6 HCAPLUS

CN Peroxydicarbonic acid, C,C'-bis(1-methylethyl) ester (CA INDEX NAME)



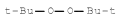
RN 105-74-8 HCAPLUS

CN Peroxide, bis(1-oxododecyl) (CA INDEX NAME)



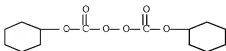
RN 110-05-4 HCAPLUS

CN Peroxide, bis(1,1-dimethylethyl) (CA INDEX NAME)



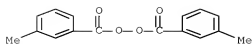
RN 1561-49-5 HCAPLUS

CN Peroxydicarbonic acid, C,C'-dicyclohexyl ester (CA INDEX NAME)



RN 1712-87-4 HCAPLUS

CN Peroxide, bis(3-methylbenzoyl) (CA INDEX NAME)



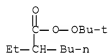
RN 2167-23-9 HCAPLUS

CN Peroxide, 1,1'-(1-methylpropylidene)bis[2-(1,1-dimethylethyl)] (CA INDEX NAME)



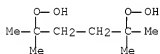
RN 3006-82-4 HCAPLUS

CN Hexaneperoxoic acid, 2-ethyl-, 1,1-dimethylethyl ester (CA INDEX NAME)



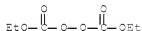
RN 3025-88-5 HCAPLUS

CN Hydroperoxide, 1,1'-(1,1,4,4-tetramethyl-1,4-butanediyl)bis- (CA INDEX NAME)



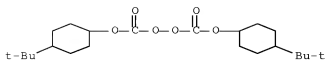
RN 14666-78-5 HCAPLUS

CN Peroxydicarbonic acid, diethyl ester (CA INDEX NAME)



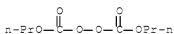
RN 15520-11-3 HCAPLUS

CN Peroxydicarbonic acid, C,C'-bis[4-(1,1-dimethylethyl)cyclohexyl] ester (CA INDEX NAME)



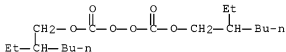
RN 16066-38-9 HCAPLUS

CN Peroxydicarbonic acid, C,C'-dipropyl ester (CA INDEX NAME)



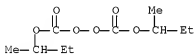
RN 16111-62-9 HCAPLUS

CN Peroxydicarbonic acid, C,C'-bis(2-ethylhexyl) ester (CA INDEX NAME)



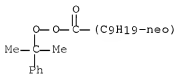
RN 19910-65-7 HCAPLUS

CN Peroxydicarbonic acid, C,C'-bis(1-methylpropyl) ester (CA INDEX NAME)



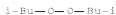
RN 26748-47-0 HCAPLUS

CN Neodecaneperoxoic acid, 1-methyl-1-phenylethyl ester (CA INDEX NAME)



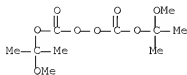
RN 32752-09-3 HCAPLUS

CN Peroxide, bis(2-methylpropyl) (CA INDEX NAME)



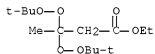
RN 52373-75-8 HCAPLUS

CN Peroxydicarbonic acid, bis(1-methoxy-1-methylethyl) ester (9CI) (CA INDEX NAME)



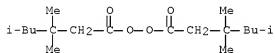
RN 55794-20-2 HCAPLUS

CN Butanoic acid, 3,3-bis[(1,1-dimethylethyl)dioxy]-, ethyl ester (CA INDEX NAME)



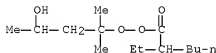
RN 92177-99-6 HCAPLUS

CN Peroxide, bis(3,3,5-trimethyl-1-oxohexyl) (9CI) (CA INDEX NAME)



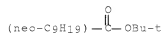
RN 95732-35-7 HCAPLUS

CN Hexaneperoxoic acid, 2-ethyl-, 3-hydroxy-1,1-dimethylbutyl ester (CA INDEX NAME)



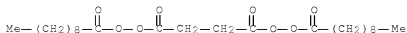
RN 116657-72-8 HCAPLUS

CN Neodecanoic acid, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



RN 118416-46-9 HCAPLUS

CN Peroxide, (1,4-dioxo-1,4-butanediyl)bis[(1-oxodecyl) (9CI) (CA INDEX NAME)



L113 ANSWER 6 OF 11 HCAPLUS COPYRIGHT 2008 ACS on STN

AN 2003:242661 HCAPLUS [Full-text](#)

DN 138:274065

TI Secondary lithium polymer electrolyte battery and its manufacture

IN Torata, Naoto; Nishijima, Motoaki; Nishimura, Naoto

PA Sharp Kabushiki Kaisha, Japan

SO PCT Int. Appl., 48 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003026056	A1	20030327	WO 2002-JP9532	20020917 <--
	W: CN, IN, KR, US				
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR				
	JP 2003092140	A	20030328	JP 2001-282603	20010918 <--
	JP 3976529	B2	20070919		
	CN 1555591	A	20041215	CN 2002-818242	20020917 <--
	TW 561641	B	20031111	TW 2002-91121330	20020918 <--
PRAI	JP 2001-282603	A	20010918	<--	

AB The battery has a polymer electrolyte layer, comprising a Li⁺ conductive polymer gel, between a cathode and an anode; and is manufactured by forming a precursor solution containing ≥1 polymerizable monomer, a Li salt, a nonaq. organic solvent mixture, and 500-10,000 ppm photoinitiator initiating polymerization reaction by UV radiation; impregnating the cathode and/or the anode and a substrate with the precursor solution, and polymerizing the polymerizable monomer by UV radiation with illuminance ≥ 30 mW/cm² for 0.1-20 s. to form the polymer electrolyte layer. By optimizing the concentration of the photoinitiator and the UV radiation illuminance, the battery characteristics and productivity can be improved.

IC ICM B01M0010-40

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)

ST secondary lithium battery polymer electrolyte manuf;

photoinitiator concn UV radiation illuminance

IT Polyethers, uses

RL: DEV (Device component use); USES (Uses)

(acrylates; manufacture of polymer electrolytes using photoinitiator

and UV radiation with controlled concentration and illuminance for

secondary

lithium batteries)

IT Secondary batteries

(lithium; manufacture of polymer electrolytes using

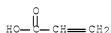
photoinitiator and UV radiation with controlled concentration and

illuminance for secondary lithium batteries)

IT Battery electrolytes

(manufacture of polymer electrolytes using photoinitiator and UV

- radiation with controlled concentration and illuminance for secondary lithium batteries)
- IT 947-19-3, 1-Hydroxy-cyclohexyl-phenylketone 24650-42-8,
2,2-Dimethoxy-2-phenylacetophenone 75980-60-8 145052-34-2,
Bis(2,6-dimethoxybenzoyl)-2,4,4-trimethyl-pentylphosphine oxide
RL: CAT (Catalyst use); USES (Uses)
(manufacture of polymer electrolytes using photoinitiator and UV radiation with controlled concentration and illuminance for secondary lithium batteries)
- IT 79-10-7U, Acrylic acid, esters, polymers 96-48-0,
γ-Butyrolactone 96-49-1, Ethylene carbonate 872-36-6, Vinylene carbonate 9003-11-6, Ethylene oxide-propylene oxide copolymer 12190-79-3, Cobalt lithium oxide (CoLiO2) 14283-07-9, Lithium tetrafluoroborate 21324-40-3, Lithium hexafluorophosphate 26748-41-4
RL: DEV (Device component use); USES (Uses)
(manufacture of polymer electrolytes using photoinitiator and UV radiation with controlled concentration and illuminance for secondary lithium batteries)
- IT 7782-42-5, Graphite, uses
RL: DEV (Device component use); USES (Uses)
(synthetic, amorphous; manufacture of polymer electrolytes using photoinitiator and UV radiation with controlled concentration and illuminance for secondary lithium batteries)
- IT 79-10-7D, Acrylic acid, esters, polymers 9003-11-6,
Ethylene oxide-propylene oxide copolymer 12190-79-3, Cobalt lithium oxide (CoLiO2) 14283-07-9, Lithium tetrafluoroborate 21324-40-3, Lithium hexafluorophosphate 26748-41-4
RL: DEV (Device component use); USES (Uses)
(manufacture of polymer electrolytes using photoinitiator and UV radiation with controlled concentration and illuminance for secondary lithium batteries)
- RN 79-10-7 HCAPLUS
CN 2-Propenoic acid (CA INDEX NAME)



- RN 9003-11-6 HCAPLUS
CN Oxirane, 2-methyl-, polymer with oxirane (CA INDEX NAME)
- CM 1
- CRN 75-56-9
CMF C3 H6 O



CRN 75-21-8
CMF C2 H4 O



RN 12190-79-3 HCAPLUS
CN Cobalt lithium oxide (CoLiO2) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	2	17778-80-2
Co	1	7440-48-4
Li	1	7439-93-2

RN 14283-07-9 HCAPLUS
CN Borate(1-), tetrafluoro-, lithium (1:1) (CA INDEX NAME)



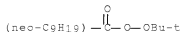
● Li+

RN 21324-40-3 HCAPLUS
CN Phosphate(1-), hexafluoro-, lithium (1:1) (CA INDEX NAME)



● Li+

RN 26748-41-4 HCAPLUS
CN Neodecaneperoxoic acid, 1,1-dimethylethyl ester (CA INDEX NAME)



RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Baionikusu Kabushiki Ka	2001			JP 2001210380 A	HCAPLUS
Japan Energy Corp	1997			JP 09-185962 A	HCAPLUS
Nippon Kayaku Co Ltd	2000			JP 200080138 A	
Ricoh Co Ltd	1998			JP 10-218913 A	HCAPLUS
Sanyo Electric Co Ltd	1997			JP 09-97617 A	HCAPLUS
Yamada	2001			JP 2001167743 A	HCAPLUS
Yamada	2001			US 20015561 A1	

L113 ANSWER 7 OF 11 HCAPLUS COPYRIGHT 2008 ACS on STN

AN 2002:754752 HCAPLUS Full-text

DN 137:281874

TI Secondary polymer electrolyte lithium battery and its manufacture

IN Nishijima, Motoaki; Torata, Naoto; Nishimura, Naoto; Mitate, Takehito

PA Sharp Kabushiki Kaisha, Japan

SO PCT Int. Appl., 67 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002078114	A1	20021003	WO 2002-JP2872	20020325 <--
	W: CN, IN, JP, KR, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
	CN 1528028	A	20040908	CN 2002-807102	20020325 <--
	TW 554560	B	20030921	TW 2002-91106006	20020327 <--
PRAI	JP 2001-90865	A	20010327	<--	
	JP 2001-122095	A	20010420	<--	
AB	The battery has a solid electrolyte, containing a porous material having light transmittance ≥50%, an organic electrolyte solution, and a polymer, adhered on the battery cathode or anode. The porous material is preferably a nonwoven fabric. The battery is prepared by: impregnating a porous material with polymer electrolyte precursor containing polymerizable monomer(s), a Li salt, an optical initiator, and a thermal initiator; laminating the impregnated material with a cathode or an anode; primarily polymerizing the precursor under light illumination at 30-100°; stacking the other electrode on the prepolymerized layer; and polymerizing at 30-100°.				
IC	ICM H01M0010-40				
	ICS H01M0004-02; H01M0004-04; H01M0004-56				
CC	52-2 (Electrochemical, Radiational, and Thermal Energy Technology)				
ST	secondary lithium battery polymer electrolyte manuf;				
	optical polymn lithium battery electrolyte manuf;				
	thermal polymn lithium battery electrolyte manuf				
IT	Polyester fibers, uses				
	RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)				
	(manufacture of polymer electrolytes containing nonwoven fabric substrates				
on	electrodes for secondary lithium batteries)				
IT	Battery electrolytes				
	(mixed initiators in manufacture of polymer electrolytes with nonwoven substrates for secondary lithium batteries				
)				

IT 9003-11-6, Ethylene oxide-propylene oxide copolymer
 111459-11-1, Ethylene oxide-propylene oxide copolymer, diacrylate,
 polymer
 RL: CPS (Chemical process); DEV (Device component use); PEP (Physical,
 engineering or chemical process); PROC (Process); USES (Uses)
 (manufacture of polymer electrolytes containing nonwoven fabric substrates
 on electrodes for secondary lithium batteries)

IT 96-48-0, γ -Butyrolactone 96-49-1, Ethylene carbonate
 21324-40-3, Lithium hexafluorophosphate
 RL: DEV (Device component use); PEP (Physical, engineering or chemical
 process); PYP (Physical process); PROC (Process); USES (Uses)
 (manufacture of polymer electrolytes containing nonwoven fabric substrates
 on electrodes for secondary lithium batteries)

IT 947-19-3, 1-Hydroxy-cyclohexyl phenyl ketone 24650-42-8,
 2,2-Dimethoxy-2-phenylacetophenone 75980-60-8, 2,4,6-
 Trimethylbenzoyldiphenylphosphine oxide 162881-26-7,
 Bis-(2,4,6-trimethylbenzoyl)-phenylphosphine oxide 464934-75-6
 RL: CAT (Catalyst use); USES (Uses)
 (optical initiators in manufacture of polymer electrolytes with
 nonwoven substrates for secondary lithium batteries
)

IT 3851-87-4, 3,5,5-Trimethylhexanoyl peroxide 26748-41-4,
 tert-Butyl peroxy neodecanoate 464934-76-7 465532-67-6
 RL: CAT (Catalyst use); USES (Uses)
 (thermal initiators in manufacture of polymer electrolytes with
 nonwoven substrates for secondary lithium batteries
)

IT 9003-11-6, Ethylene oxide-propylene oxide copolymer
 111459-11-1, Ethylene oxide-propylene oxide copolymer, diacrylate,
 polymer
 RL: CPS (Chemical process); DEV (Device component use); PEP (Physical,
 engineering or chemical process); PROC (Process); USES (Uses)
 (manufacture of polymer electrolytes containing nonwoven fabric substrates
 on electrodes for secondary lithium batteries)

RN 9003-11-6 HCAPLUS
 CN Oxirane, 2-methyl-, polymer with oxirane (CA INDEX NAME)

CM 1

CRN 75-56-9
 CMF C3 H6 O



CM 2

CRN 75-21-8
 CMF C2 H4 O



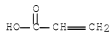
RN 111459-11-1 HCAPLUS
 CN Oxirane, methyl-, polymer with oxirane, di-2-propenoate, homopolymer (9CI)
 (CA INDEX NAME)

CM 1

CRN 52503-44-3
 CMF (C3 H6 O . C2 H4 O)x . 2 C3 H4 O2

CM 2

CRN 79-10-7
 CMF C3 H4 O2



CM 3

CRN 9003-11-6
 CMF (C3 H6 O . C2 H4 O)x
 CCI PMS

CM 4

CRN 75-56-9
 CMF C3 H6 O



CM 5

CRN 75-21-8
 CMF C2 H4 O



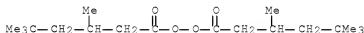
IT 21324-40-3, Lithium hexafluorophosphate
 RL: DEV (Device component use); PEP (Physical, engineering or chemical
 process); PYP (Physical process); PROC (Process); USES (Uses)

on
 (manufacture of polymer electrolytes containing nonwoven fabric substrates
 electrodes for secondary lithium batteries)
 RN 21324-40-3 HCAPLUS
 CN Phosphate(1-), hexafluoro-, lithium (1:1) (CA INDEX NAME)

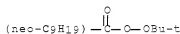


● Li+

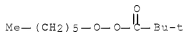
IT 3851-87-4, 3,5,5-Trimethylhexanoyl peroxide 26748-41-4,
 tert-Butyl peroxy neodecanoate 464934-76-7 465532-67-6
 RL: CAT (Catalyst use); USES (Uses)
 (thermal initiators in manufacture of polymer electrolytes with
 nonwoven substrates for secondary lithium batteries)
 RN 3851-87-4 HCAPLUS
 CN Peroxide, bis(3,5,5-trimethyl-1-oxohexyl) (CA INDEX NAME)



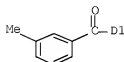
RN 26748-41-4 HCAPLUS
 CN Neodecaneperoxoic acid, 1,1-dimethylethyl ester (CA INDEX NAME)



RN 464934-76-7 HCAPLUS
 CN Propaneperoxoic acid, 2,2-dimethyl-, hexyl ester (CA INDEX NAME)



RN 465532-67-6 HCAPLUS
 CN Benzenecarboxiperoxoic acid, (3-methylbenzoyl)- (9CI) (CA INDEX NAME)



RETABLE

Referenced Author (RAU)	Year (RPy)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Dai-Ichi Kogyo Seiyaku	1996			JP 08315855 A	HCAPLUS
Hydro-Quebec	1998			JP 2000507387 A	
Hydro-Quebec	1998			US 6280882 B1	HCAPLUS
Hydro-Quebec	1998			EP 890192 A1	HCAPLUS
Hydro-Quebec	1998			WO 9832183 A1	HCAPLUS
Mitsubishi Chemical Cor	2000			JP 2000082496 A	HCAPLUS
Sanyo Electric Co Ltd	1997			JP 09129246 A	HCAPLUS
Sharp Corp	1992			JP 04368778 A	HCAPLUS
Sharp Corp	1992			EP 520667 A1	HCAPLUS
Sharp Corp	1992			US 5344726 A	HCAPLUS
Toa Nenryo Kogyo Kabush	1989			JP 01158051 A	HCAPLUS
Toa Nenryo Kogyo Kabush	1989			EP 309259 A2	HCAPLUS
Toa Nenryo Kogyo Kabush	1989			US 4849311 A	HCAPLUS

L113 ANSWER 8 OF 11 HCAPLUS COPYRIGHT 2008 ACS on STN

AN 2002:257849 HCAPLUS [Full-text](#)

DN 137:127466

TI Solid polymer electrolytes of PEO system by UV-curing

AU Qiao, Linzhao; Wei, Jie

CS College of Material Science and Engineering, Beijing University of Chemical Engineering, Beijing, 100029, Peop. Rep. China

SO Huagong Xuebao (Chinese Edition) (2002), 53(1), 96-99

CODEN: HUKHAI; ISSN: 0438-1157

PB Huaxue Gongye Chubanshe, Huagong Xuebao Bianjibu

DT Journal

LA Chinese

AB Polyethylene glycol diacrylates (PEGDA) monomers, which contain double bond on the terminal group of polyethylene glycol (PEG) and can be used in synthesis of UV-curable solid polymer electrolytes (SPE), were prepared through esterification of PEG and acrylic acid. A cured conductive polymer film consisting of lithium salt was then obtained by irradiation with UV rays. The factors affecting film-forming, photosensitivity and conductance were studied. From expts., while Li/O = 1/6 and n = 18, the ionic conductivity of the SPE membrane could reach 10⁻⁵ S.cm⁻¹ at room temperature and its performance was relatively good.

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)

ST solid polymer electrolyte membrane lithium manuf PEO UV curing

IT Ionic conductivity

Polymer electrolytes

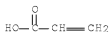
(manufacturing of solid polymer electrolytes membranes of PEO system by

- UV-curing)
- IT 7791-03-9, Lithium perchlorate
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (manufacturing of solid polymer electrolytes membranes of PEO system by UV-curing)
- IT 189146-15-4, Darocur 4265
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (photoinitiator; manufacturing of solid polymer electrolytes membranes of PEO system by UV-curing)
- IT 79-10-7, Acrylic acid, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (polyethylene glycol diacrylates monomer prepared through esterification of PEG and; for manufacturing of solid polymer electrolytes membranes of PEO system by UV-curing)
- IT 25322-68-3, PEG
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (polyethylene glycol diacrylates monomer prepared through esterification of acrylic acid and; for manufacturing of solid polymer electrolytes membranes of PEO system by UV-curing)
- IT 26570-48-9P, Polyethylene glycol diacrylate
 RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
 (prepared through esterification of PEG and acrylic acid; for manufacturing of solid polymer electrolytes membranes of PEO system by UV-curing)
- IT 7791-03-9, Lithium perchlorate
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (manufacturing of solid polymer electrolytes membranes of PEO system by UV-curing)
- RN 7791-03-9 HCAPLUS
- CN Perchloric acid, lithium salt (1:1) (CA INDEX NAME)



● Li

- IT 79-10-7, Acrylic acid, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (polyethylene glycol diacrylates monomer prepared through esterification of PEG and; for manufacturing of solid polymer electrolytes membranes of PEO system by UV-curing)
- RN 79-10-7 HCAPLUS
- CN 2-Propenoic acid (CA INDEX NAME)



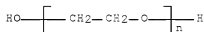
- IT 25322-68-3, PEG

RL: RCT (Reactant); RACT (Reactant or reagent)

(polyethylene glycol diacrylates monomer prepared through esterification of acrylic acid and; for manufacturing of solid polymer electrolytes membranes of PEO system by UV-curing)

RN 25322-68-3 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -hydro- ω -hydroxy- (CA INDEX NAME)



IT 26570-48-9P, Polyethylene glycol diacrylate

RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation);

RACT (Reactant or reagent)

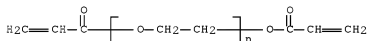
(prepared through esterification of PEG and acrylic acid; for manufacturing

of

solid polymer electrolytes membranes of PEO system by UV-curing)

RN 26570-48-9 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -(1-oxo-2-propen-1-yl)- ω -[(1-oxo-2-propen-1-yl)oxy]- (CA INDEX NAME)



L113 ANSWER 9 OF 11 HCAPLUS COPYRIGHT 2008 ACS on STN

AN 1992:491879 HCAPLUS [Full-text](#)

DN 117:91879

OREF 117:16033a,16036a

TI Functionalized polyether-type ion-conducting polymer electrolytes

IN Motogami, Kenji; Mori, Shigeo

PA Daiichi Kogyo Seiyaku K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 04068064	A	19920303	JP 1990-180355	19900706 <--
	JP 2923542	B2	19990726		
PRAI	JP 1990-180355		19900706	<--	

AB The title polyethers, being used with soluble electrolyte salts and O- and/or N-containing organic solvents, have low glass-transition temperature (T_g), and are amorphous polymers obtained by the crosslinking of the active H-containing compound-initiated block or random addition products of glycidyl ethers and C23 alkylene oxides which bear terminal functional groups. The amorphous nature of the polymers can prevent the sudden decrease of conductivity at low temperature as seen in crystalline similar polymers. Thus, the KOH-catalyzed reaction of glycerol initiator 15 with 1,2-epoxybutane 370, then with glycidyl triethylene glycol Me ether 285 g gave a polyether which was esterified with acrylic acid (I) at the OH/I equivalent weight ratio 1.1:1. Heating 3.6 g the acrylate polyether- polyol with 0.12 g LiClO₄ and a MEK solution of

photoinitiator under N at 80° for 1 h and in vacuo for 8 h to remove MEK, and impregnating into 1.8 g propylene carbonate gave a title product which showed ion conductivity 1.8×10^{-4} , 1.0×10^{-4} , and 5.2×10^{-5} s/cm at 20, 0 and -20°, resp.

- IC ICM C08L0071-02
ICS C08F0299-02; C08G0018-48; H01B0001-06; H01M0006-18;
H01M0010-40
- CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 72
- ST complex polyether polyol crosslinked electrolyte;
polyoxyalkylene polyol acrylate polymer electrolyte;
lithium perchlorate polyoxyalkylene acrylate polymer
- IT Electric conductors
Polyelectrolytes
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, amorphous polyoxyalkylene-polyol-based acrylic
polymers or urethane polymer complexes for)
- IT Polyoxyalkylenes, preparation
RL: SPN (Synthetic preparation); PREP (Preparation)
(acrylic, polyol-initiated, electrolytes, preparation of
ion-conducting and amorphous)
- IT Acrylic polymers, preparation
Urethane polymers, preparation
RL: SPN (Synthetic preparation); PREP (Preparation)
(polyoxyalkylene-, polyol-initiated, electrolytes,
preparation of ion-conducting and amorphous)
- IT 50-70-4DP, Sorbitol, ether with mixed oxirane compds.,
methacrylated, polymers, lithium complexes 79-41-4DP,
ester with polymers of C12 α -olefin oxide and glycidyl ether
initiated by sorbitol, polymers, lithium complex
80-05-7DP, ether with mixed oxirane compds., polymers, polymer with
polyisocyanates, lithium complexes 107-21-1DP,
1,2-Ethanediol, ether with mixed oxirane compds., methacrylated, polymers,
lithium complexes 822-06-0DP, polymers with polyether-
polyols, lithium complex 930-37-0DP, Methyl glycidyl
ether, polymers with C4 α -olefin oxide, ether with diols,
methacrylated, polymers, lithium complexes 4067-16-7DP,
Pentaethylenhexamine, ether with mixed oxirane compds., methacrylated,
polymers, lithium complexes 7439-93-2DP,
lithium, polyether-polyol-based polymer complexes
14435-47-3DP, polymers with C6 α -olefin oxide, ether with
polyamines, methacrylated, polymers, lithium complexes
40349-67-5DP, polymers with C12 α -olefin oxide, ether with sorbitol,
methacrylates, polymers, lithium complexes 134966-38-4DP,
polymers with C12 α -olefin oxide, ether with polyamines,
methacrylated, polymers, lithium complexes 142661-73-2DP
, lithium complex 142743-34-8DP, lithium
complex 142743-35-9DP, lithium complex 142743-36-0DP,
lithium complex 142953-73-9DP, lithium complex
142953-74-0DP, triethers with ethanolamine, 4-ethenylbenzoate ester,
polymers, lithium complexes
RL: SPN (Synthetic preparation); PREP (Preparation)
(electrolytes, preparation of ion-conducting and amorphous)
- IT 96-48-0 108-32-7, Propylene carbonate
RL: NUU (Other use, unclassified); USES (Uses)
(solvents, for amorphous polypolyoxyalkylene-polyol-based
acrylic polymers or urethane polymer lithium complexes)
- IT 50-70-4DP, Sorbitol, ether with mixed oxirane compds.,
methacrylated, polymers, lithium complexes 79-41-4DP,

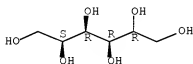
ester with polymers of C12 α -olefin oxide and glycidyl ether
 initiated by sorbitol, polymers, lithium complex
 107-21-1DP, 1,2-Ethanediol, ether with mixed oxirane compds.,
 methacrylated, polymers, lithium complexes 7439-93-2DP
 , Lithium, polyether-polyol-based polymer complexes
 142661-73-2DP, lithium complex 142743-34-6DP,
 lithium complex

RL: SPN (Synthetic preparation); PREP (Preparation)
 (electrolytes, preparation of ion-conducting and amorphous)

RN 50-70-4 HCAPLUS

CN D-Glucitol (CA INDEX NAME)

Absolute stereochemistry.



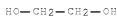
RN 79-41-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl- (CA INDEX NAME)



RN 107-21-1 HCAPLUS

CN 1,2-Ethanediol (CA INDEX NAME)



RN 7439-93-2 HCAPLUS

CN Lithium (CA INDEX NAME)

L1

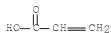
RN 142661-73-2 HCAPLUS

CN Oxirane, ethyl-, polymer with 2,5,8,11-tetraoxadodec-1-yloxirane, ether
 with 1,2,3-propanetriol (3:1), 2-propenoate, block (9CI) (CA INDEX NAME)

CM 1

CRN 79-10-7

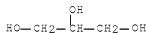
CMF C3 H4 O2



CM 2

CRN 56-81-5

CMF C3 H8 O3



CM 3

CRN 176022-70-1

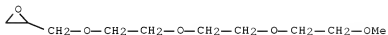
CMF (C10 H20 O5 . C4 H8 O)x

CCI PMS

CM 4

CRN 73692-54-3

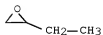
CMF C10 H20 O5



CM 5

CRN 106-88-7

CMF C4 H8 O



RN 142743-34-8 HCAPLUS

CN Oxirane, butyl-, polymer with [[2-(2-methoxyethoxy)ethoxy]methyl]oxirane,
ether with 1,2,3-propanetriol (3:1), 2-propenoate, homopolymer, block
(9CI) (CA INDEX NAME)

CM 1

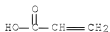
CRN 142661-72-1

CMF (C8 H16 O4 . C6 H12 O)x . 1/3 C3 H8 O3 . x C3 H4 O2

CM 2

CRN 79-10-7

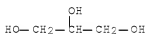
CMF C3 H4 O2



CM 3

CRN 56-81-5

CMF C3 H8 O3



CM 4

CRN 163478-86-2

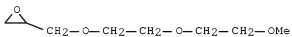
CMF (C8 H16 O4 . C6 H12 O)x

CCI PMS

CM 5

CRN 71712-93-1

CMF C8 H16 O4



CM 6

CRN 1436-34-6

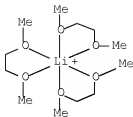
CMF C6 H12 O



L113 ANSWER 10 OF 11 HCAPLUS COPYRIGHT 2008 ACS on STN
 AN 1987:179845 HCAPLUS Full-text
 DN 106:179845
 OREF 106:29149a,29152a
 TI Laminar lithium battery
 IN Nagai, Tatsu; Kajita, Kozo; Manabe, Toshikatsu

PA Hitachi Maxell, Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 6 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 62020263	A	19870128	JP 1985-158949	19850718 <--
PRAI	JP 1985-158949		19850718	<--	
AB	<p>A viscous mixture of a Li salt and Li polymethacrylate is used as electrolyte in laminar Li batteries. A solution of LiBPh₄3MeOC₂H₄OMe 11.2, propylene carbonate 23.78, and Li methacrylate monomer 5.0 parts was added with 0.05 parts benzoyl peroxide to initiate polymerization at 100° in a sealed metal reactor for 3 h. The obtained electrolyte had an ionic conductivity of 10-3 S/cm. A mixture of TiS₂-50% electrolyte was screen printed on a stainless steel plate to form a 100-μ cathode layer surrounded by a polypropylene frame, a 25-μ corrugated porous polypropylene separator impregnated with the electrolyte was laid on the cathode, followed by a 80-μ Li-Al alloy. A stainless steel anode collector was sealed to the frame on the cathode plate via a modified-polyolefin hot-melt binder to form a battery. No leaking of the electrolyte was observed during the assembling process. This battery had a much longer cycle life than a battery using an electrolyte without the polymer.</p>				
IC	ICM R01M0010-10				
CC	52-2 (Electrochemical, Radiational, and Thermal Energy Technology)				
ST	Section cross-reference(s): 38				
ST	lithium tetraphenylborate polymethacrylate battery				
IT	electrolyte				
IT	Batteries, secondary				
IT	(lithium, electrolytes from mixts. of lithium tetraphenylborate-dimethoxyethane adduct and lithium polymethacrylate for)				
IT	75965-35-4				
IT	RL: USES (Uses)				
IT	(electrolytes from mixts. of lithium polymethacrylate and, for lithium batteries)				
IT	29297-91-4, Lithium polymethacrylate				
IT	RL: USES (Uses)				
IT	(electrolytes from mixts. of lithium tetraphenylborate-dimethoxyethane adduct and, for lithium batteries)				
IT	75965-35-4				
IT	RL: USES (Uses)				
IT	(electrolytes from mixts. of lithium polymethacrylate and, for lithium batteries)				
RN	75965-35-4 HCAPLUS				
CN	Lithium(1+), tris[1,2-di(methoxy-κO)ethane]-, (OC-6-11)-, tetraphenylborate(1-) (9CI) (CA INDEX NAME)				
CM	1				
CRN	75964-74-8				
CMF	C12 H30 Li O6				
CCI	CCS				

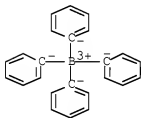


CM 2

CRN 4358-26-3

CMF C24 H20 B

CCI CCS



IT 29297-91-4, Lithium polymethacrylate

RL: USES (Uses)

(electrolytes from mixts. of lithium tetraphenylborate-
dimethoxyethane adduct and, for lithium batteries)

RN 29297-91-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, homopolymer, lithium salt (CA INDEX NAME)

CM 1

CRN 25087-26-7

CMF (C4 H6 O2)x

CCI PMS

CM 2

CRN 79-41-4

CMF C4 H6 O2



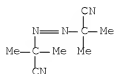
L113 ANSWER 11 OF 11 HCAPLUS COPYRIGHT 2008 ACS on STN

AN 1986:415981 HCAPLUS [Full-text](#)

DN 105:15981

OREF 105:2569a,2572a

- TI Poly[lithium methacrylate-co-oligo(oxyethylene)methacrylate] as
a solid electrolyte with high ionic conductivity
- AU Kobayashi, Norihisa; Uchiyama, Masahiro; Tsuchida, Eishun
- CS Dep. Polym. Chem., Waseda Univ., Tokyo, 160, Japan
- SO Solid State Ionics (1985), 17(4), 307-11
- CODEN: SSIOD3; ISSN: 0167-2738
- DT Journal
- LA English
- AB Poly[lithium methacrylate-co-oligo(oxyethylene)methacrylate] film was prepared
as a polymeric solid electrolyte which showed a Li ionic conductivity of 2×10^{-7} (S/cm). This film contains no organic plasticizer nor low-mol. weight
Li salts and was shown to be a single-ion conductor in the solid state. Li⁺
ionic conductivity was deeply influenced by the glass transition temperature
and Li methacrylate content of the film. A rechargeable battery composed of
metallic Li/this film/graphite showed better characteristics than any
previously reported systems using polymeric solid electrolytes.
- CC 76-2 (Electric Phenomena)
- Section cross-reference(s): 36
- ST lithium methacrylate polymer electrolyte;
oligo(oxyethylene)methacrylate polymer cond; oxyethylene methacrylate polymer
cond
- IT Batteries, primary
(from poly[lithium methacrylate-oligo(oxyethylene)methacrylate])
- IT Polymerization
(of lithium methacrylate with oligo(oxyethylene)methacrylate
for ionic conductors)
- IT Electric conductors
(ionic, from poly[lithium methacrylate-
oligo(oxyethylene)methacrylate])
- IT Electric conductivity and conduction
(ionic, in poly[lithium methacrylate-co-
oligo(oxyethylene)methacrylate] films)
- IT Electric conductivity and conduction
(ionic, of poly[lithium methacrylate-
oligo(oxyethylene)methacrylate])
- IT 76-67-1 7791-03-9 13234-23-6
25179-23-1
RL: USES (Uses)
(in ionic conductor polymer preparation)
- IT 103205-01-4P
RL: PREP (Preparation)
(preparation of, as ionic conductor)
- IT 102814-54-0
RL: TEM (Technical or engineered material use); USES (Uses)
(solid electrolyte, with high ionic conductivity)
- IT 17341-24-1, properties
RL: PRP (Properties)
(transport number of, in lithium methacrylate-
oligo(oxyethylene)methacrylate copolymer)
- IT 78-67-1 7791-03-9 13234-23-6
25179-23-1
RL: USES (Uses)
(in ionic conductor polymer preparation)
- RN 78-67-1 HCAPLUS
- CN Propanenitrile, 2,2'-(1,2-diazenediyl)bis[2-methyl- (CA INDEX NAME)]



RN 7791-03-9 HCAPLUS

CN Perchloric acid, lithium salt (1:1) (CA INDEX NAME)



● Li

RN 13234-23-6 HCAPLUS

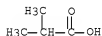
CN 2-Propenoic acid, 2-methyl-, lithium salt (1:1) (CA INDEX NAME)



● Li

RN 25179-23-1 HCAPLUS

CN Propanoic acid, 2-methyl-, lithium salt (9CI) (CA INDEX NAME)



● Li

IT 103295-01-4P

RL: PREP (Preparation)
(preparation of, as ionic conductor)

RN 103285-01-4 HCAPLUS

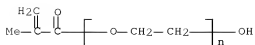
CN 2-Propenoic acid, 2-methyl-, lithium salt, polymer with
α-(2-methyl-1-oxo-2-propenyl)-ω-hydroxypoly(oxy-1,2-
ethanediyl) (9CI) (CA INDEX NAME)

CM 1

CRN 25736-86-1

CMF (C2 H4 O)n C4 H6 O2

CCI PMS



CM 2

CRN 13234-23-6

CMF C4 H6 O2 . Li



● Li

IT 102814-54-0

RL: TEM (Technical or engineered material use); USES (Uses)
(solid electrolyte, with high ionic conductivity)

RN 102814-54-0 HCAPLUS

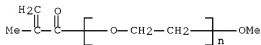
CN 2-Propenoic acid, 2-methyl-, lithium salt, polymer with
 α -(2-methyl-1-oxo-2-propenyl)- ω -methoxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

CM 1

CRN 26915-72-0

CMF (C2 H4 O)n C5 H8 O2

CCI PMS



CM 2

CRN 13234-23-6

CMF C4 H6 O2 . Li



● Li

IT 17341-24-1, properties
 RL: PRP (Properties)
 (transport number of, in lithium methacrylate-
 oligo(oxyethylene)methacrylate copolymer)
 RN 17341-24-1 HCAPLUS
 CN Lithium, ion (Li+) (CA INDEX NAME)

Li+

=> d his

(FILE 'HOME' ENTERED AT 13:18:42 ON 29 APR 2008)
 SET COST OFF

FILE 'HCAPLUS' ENTERED AT 13:18:56 ON 29 APR 2008

L1 1 S US20040029016/PN OR (US2003-635122# OR KR2003-28968 OR KR2002
 E HWANG/AU
 L2 3 S E3
 E HWANG D/AU
 L3 49 S E3,E4
 E HWANG DUCK/AU
 L4 24 S E4,E11
 E HWANG NAME/AU
 L5 14 S E4,E5
 E DUCK/AU
 L6 1 S E3
 E DUCKCHUL/AU
 E LEE/AU
 L7 40 S E3
 E LEE K/AU
 L8 1431 S E3,E24
 E LEE KYOUNG/AU
 L9 78 S E3,E29
 E LEE KYOUNGHEE/AU
 L10 1 S E3
 E LEE NAME/AU
 L11 303 S E4-E11
 E KYOUNG/AU
 E KYOUNGHEE/AU
 E SAMSU/CO
 E SAMSSU/CO
 L12 60862 S E4,E6-E24/CO,PA,CS
 L13 60872 S SAMSUNG?/CO,PA,CS
 E E13+ALL
 L14 62341 S E2+RT OR E138-E146 OR E2-E146/PA,CS
 L15 1 S L1 AND L2-L14
 SEL RN

FILE 'REGISTRY' ENTERED AT 13:23:56 ON 29 APR 2008

L16 41 S E1-E41
 L17 6 S 1712-87-4 OR 14666-78-5 OR 52373-75-8 OR 118416-46-9 OR 95732
 L18 21 S 75-91-2 OR 78-63-7 OR 78-67-1 OR 80-15-9 OR 80-43-3 OR 94-36-
 L19 27 S L17,L18
 L20 14 S L16 NOT L19
 L21 2 S L20 AND L1/ELS

L22 3 S L16 AND ?LITHIUM?/CNS
 L23 1 S L16 AND S/ELS NOT L21,L22
 L24 1 S L21 AND LI/MF
 L25 1 S L22 AND SULFIDE
 E LITHIUM SULFIDE/CN
 L26 31 S E3-E8,E10-E17,E19-E25,E43-E54
 L27 14334 S (LI/ELS OR LITHIUM OR 7439-93-2/CRN) AND (S/ELS OR SULFUR OR
 L28 42 S L27 AND 2/ELC.SUB
 L29 46 S L26,L28,L25
 L30 11 S L20 NOT L23,L24,L25,L29
 L31 3 S L30 AND (C3H8O3 OR C4H10O4 OR C10H22O7)
 L32 2 S (ACRYLIC ACID OR METHACRYLIC ACID)/CN
 L33 8 S 79-41-4/CRN AND PMS/CI AND 1/NC AND C4H6O2
 L34 3 S L33 NOT (DIMER OR PENTAMER OR OC4/ES OR CYCLODEXTRIN)
 L35 17 S 79-10-7/CRN AND PMS/CI AND 1/NC AND C3H4O2
 L36 3 S L35 AND "(C3H4O2)X"/MF

FILE 'HCAPLUS' ENTERED AT 13:57:11 ON 29 APR 2008

L37 60275 S (L24 OR LITHIUM OR LI) AND (L23 OR S OR SULFUR OR SULPHUR OR
 L38 1187 S L29
 L39 60346 S L37,L38
 L40 3949 S L39 AND H01M/IPC,IC,ICM,ICS
 E BATTERY/CT
 L41 4037 S L39 AND (E4+OLD,NT OR E5+OLD,NT OR E5+OLD,NT OR E7+OLD,NT)
 E E8+ALL
 L42 289 S L39 AND (E2+OLD,NT OR E3+OLD,NT OR E4+OLD,NT)
 E BATTERIES/CT
 E E3+ALL
 L43 5406 S L39 AND (E1 OR E2+OLD,NT OR E3+OLD,NT OR E4+OLD,NT OR E5+OLD,
 E POLYMER ELECTROLYTE/CT
 E E5+ALL
 L44 2108 S L39 AND (E9 OR E12+OLD,NT OR E14+OLD,NT)
 L45 378 S L39 AND E13+OLD,NT
 L46 263 S L39 AND E16+OLD,NT
 L47 383 S L39 AND E8+OLD
 L48 550 S L39 AND E7+OLD
 L49 9053 S L40-L48
 L50 69 S L49 AND INITIATOR
 L51 140 S L49 AND ?INITIAT?
 E INITIATOR/CT
 L52 41 S L49 AND L19
 L53 166 S L50-L52
 L54 8444 S L39 AND (BATTERY OR (FUEL OR ?ELECTR? OR VOLTAIC)())CELL)
 L55 47 S L54 AND INITIATOR
 L56 111 S L54 AND ?INITIAT?
 L57 178 S L53,L55,L56
 L58 64 S L57 AND PY<=2003 NOT P/DT
 L59 59 S L57 AND (PD<=20030807 OR PRD<=20030807 OR AD<=20030807) AND P
 L60 123 S L58,L59
 L61 4 S L1-L15 AND L60
 L62 123 S L60,L61

FILE 'REGISTRY' ENTERED AT 14:05:37 ON 29 APR 2008

L63 FILE 'HCAPLUS' ENTERED AT 14:05:37 ON 29 APR 2008
 TRA L62 1- RN : 2576 TERMS

L64 FILE 'REGISTRY' ENTERED AT 14:05:41 ON 29 APR 2008
 2576 SEA L63
 L65 2 S L64 AND L34,L36,L32

L66 STR
 L67 5 S L66 SAM SUB=L64
 L68 121 S L66 FUL SUB=L64
 SAV TEMP L68 LAURA635A/A
 L69 3 S L68 AND (LI OR K)/ELS AND 2/NC
 L70 1 S L68 AND C2H4O AND C3H6O AND 3/NC
 L71 3 S L68 AND (C4H6O2 OR C3H4O2) AND 1/NC
 L72 2 S L71 NOT 96-33-3

FILE 'HCAPLUS' ENTERED AT 14:16:35 ON 29 APR 2008

L73 12 S L62 AND L32,L34,L36,L69,L70,L72
 L74 1 S L73 AND POLYOL
 L75 1 S L73 AND POLYHYDR?(L)ALCOHOL
 L76 0 S L73 AND TRIALKYLLOL
 L77 3 S L73 AND (GLYCEROL OR GLYCERIN?)
 L78 1 S L73 AND ?ERYTHRITOL?

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L79 2 S (GLYCEROL OR ERYTHRITOL)/CN
 L80 3 S L31,L79
 L81 501 S L64 AND (C AND H AND O)/ELS AND 3/ELC.SUB
 L82 431 S L81 NOT L68
 L83 267 S L82 NOT ACID
 L84 254 S L83 NOT L19
 L85 30 S L84 AND (C6H14O6 OR C4H10O4 OR C3H8O3 OR CH4O OR C4H6O2 OR C4
 SEL RN 2-5 11-13 16-21 23 24 26
 L86 14 S L85 NOT E1-E16
 L87 43 S L84 AND (C2H4O OR C3H6O) NOT L85
 SEL RN 1 19 27-29 33 40 41
 L88 8 S E17-E24
 L89 22 S L86,L88,L31

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L90 9 S L73 AND L89
 L91 9 S L74-L78,L90
 L92 3 S L73 NOT L91
 L93 2 S L92 NOT 130:252754/DN
 L94 14 S L61,L91,L93
 SEL DN 9 10 12
 L95 11 S L94 NOT E25-E27

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L96 TRA L95 1- RN : 230 TERMS

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L97 230 SEA L96
 L98 24 S L97 AND (LI/ELS OR ?LITHIUM?/CNS OR 7439-93-2/CRN)
 L99 27 S L97 AND (S/ELS OR SULFUR OR SULFIDE OR 7704-34-9/CRN)
 L100 5 S L98 AND L99
 L101 19 S L98 NOT L100
 L102 22 S L99 NOT L100
 L103 1 S L102 AND S/MF
 L104 27 S L97 AND L19
 L105 12 S L97 AND ?PEROX?/CNS NOT L104
 L106 11 S L105 NOT C2H4O
 L107 18 S L97 AND L68
 L108 15 S L107 NOT N/ELS
 L109 7 S L97 AND L89

L110 149 S L97 NOT L100,L101,L103,L104,L106,L108,L109
 L111 3 S L110 AND (C3H5CLO OR C2H6O2)
 L112 2 S L111 NOT N/ELs

FILE 'HCAPLUS' ENTERED AT 14:46:31 ON 29 APR 2008
 L113 11 S L95 AND L100,L101,L103,L104,L106,L108,L109,L112

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=> fil reg

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STRUCTURE FILE UPDATES: 28 APR 2008 HIGHEST RN 1017984-01-8
 DICTIONARY FILE UPDATES: 28 APR 2008 HIGHEST RN 1017984-01-8

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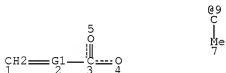
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<http://www.cas.org/support/stngen/stndoc/properties.html>

=> d l66

L66 HAS NO ANSWERS
 L66 STR



VAR G1=CH/9
 NODE ATTRIBUTES:
 DEFAULT MLEVEL IS ATOM
 DEFAULT ELEVEL IS LIMITED

GRAPH ATTRIBUTES:
 RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 7

STEREO ATTRIBUTES: NONE

=>